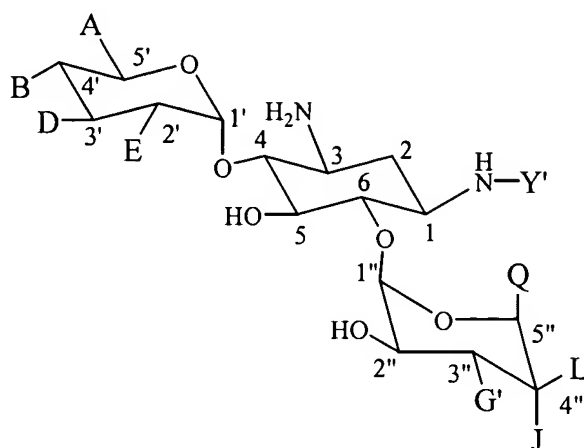


## Claims

### What is claimed is:

1. An antibody produced in response to a compound of the formula

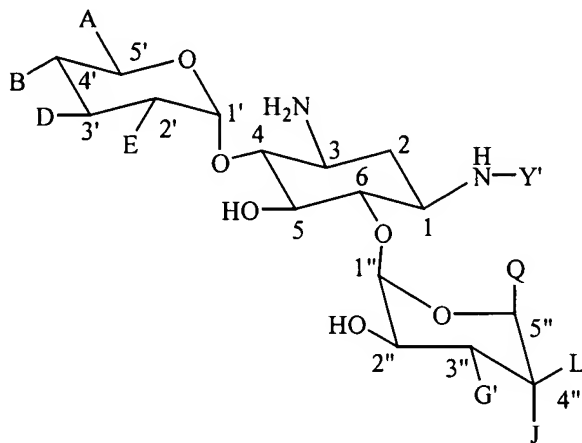


wherein A is  $\text{CH}_2\text{NH}_2$ ,  $\text{CHCH}_3\text{NH}_2$ , or  $\text{CHCH}_3\text{NHCH}_3$ ; B is H or OH; D is H or OH; E is  $\text{NH}_2$  or OH; G' is  $\text{NH}_2$ ,  $\text{NHCH}_3$ ,  $\text{NH-T}$ , or  $\text{NCH}_3\text{-T}$ ; J is H or OH; L is H,  $\text{CH}_3$ , or OH; Q is H or  $\text{CH}_2\text{OH}$ ; Y' is H,  $\text{C(=O)CH(OH)CH}_2\text{CH}_2\text{NH}_2$ , or T; T is a carrier; and T is present in only one of G' or Y'.

2. The antibody of claim 1 wherein the carrier is selected from the group consisting of poly(amino acid)s, polysaccharides, proteins, glycoproteins, and nucleic acids.

3. An assay method for determining an aminoglycoside comprising:

combining a sample suspected of containing the aminoglycoside with an antibody specific for the aminoglycoside and with a reagent of the formula

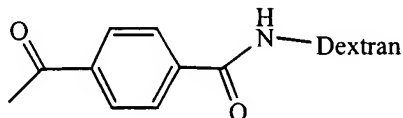


wherein A is  $\text{CH}_2\text{NH}_2$ ,  $\text{CHCH}_3\text{NH}_2$ , or  $\text{CHCH}_3\text{NHCH}_3$ ; B is H or OH; D is H or OH; E is  $\text{NH}_2$  or OH; G' is  $\text{NH}_2$ ,  $\text{NHCH}_3$ ,  $\text{NH-T}$ , or  $\text{NCH}_3\text{-T}$ ; J is H or OH; L is H,  $\text{CH}_3$ , or OH; Q is H or  $\text{CH}_2\text{OH}$ ; Y' is H,  $\text{C(=O)CH(OH)CH}_2\text{CH}_2\text{NH}_2$ , or T; T is a label; and T is present in only one of G' or Y'; the reagent comprising the analyte analog of the aminoglycoside and forming a detectable complex with the antibody; and

determining the presence or amount of the detectable complex as a measure of the aminoglycoside in the sample.

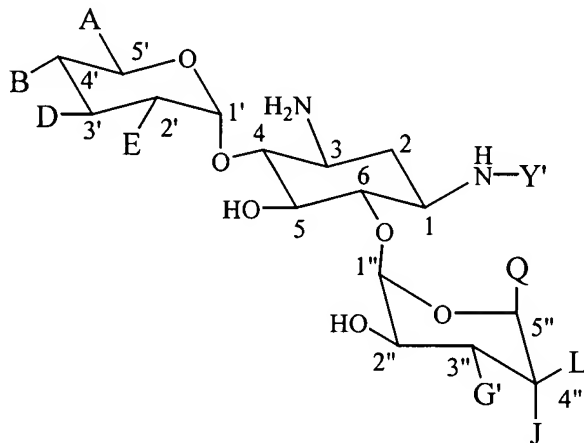
4. The assay method of claim 3 wherein the label is selected from the group consisting of enzymes, fluorescent compounds, luminescent compounds, radioactive isotopes, polymers, and microparticles.

5. An assay method according to claim 3 in which A is  $\text{CH}_2\text{NH}_2$ , B is H, D is H, E is  $\text{NH}_2$ , G' is  $\text{NHCH}_3$ , J is OH, L is  $\text{CH}_3$ , Q is H, and Y' is



6. An assay method for determining an aminoglycoside comprising:

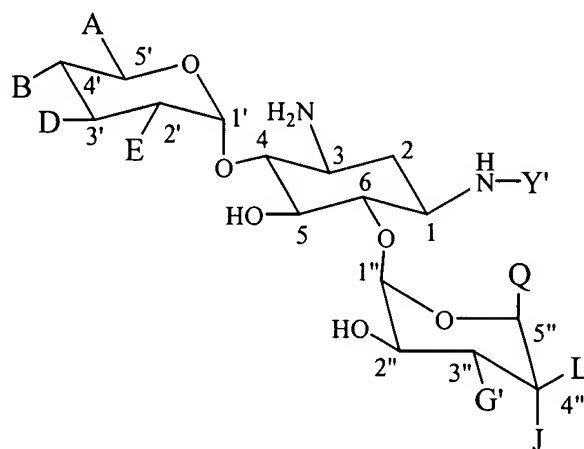
combining a sample suspected of containing the aminoglycoside with an antibody produced in response to a compound of the formula



wherein A is  $\text{CH}_2\text{NH}_2$ ,  $\text{CHCH}_3\text{NH}_2$ , or  $\text{CHCH}_3\text{NHCH}_3$ ; B is H or OH; D is H or OH; E is  $\text{NH}_2$  or OH; G' is  $\text{NH}_2$ ,  $\text{NHCH}_3$ ,  $\text{NH-T}$ , or  $\text{NCH}_3\text{-T}$ ; J is H or OH; L is H,  $\text{CH}_3$ , or OH; Q is H or  $\text{CH}_2\text{OH}$ ; Y' is H,  $\text{C(=O)CH(OH)CH}_2\text{CH}_2\text{NH}_2$ , or T; T is a carrier; and T is present in only one of G' or Y' and with a reagent comprising a complex of an analyte analog of the aminoglycoside and a label whereby the reagent forms a detectable complex with the antibody; and

determining the presence or amount of the detectable complex as a measure of the aminoglycoside in the sample.

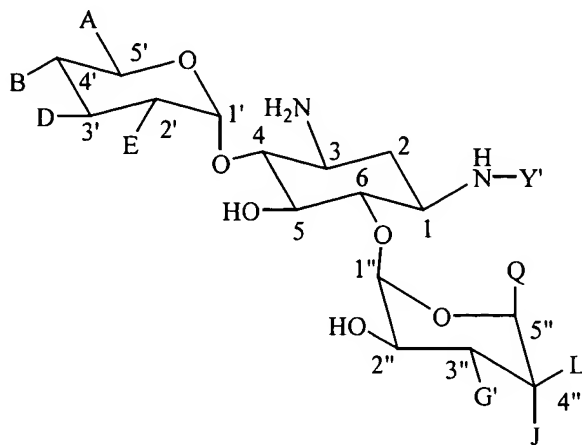
7. The assay method of claim 5 wherein the carrier is selected from the group consisting of poly(amino acid)s, polysaccharides, proteins, glycoproteins, and nucleic acids.
8. A test kit for determining an aminoglycoside in a sample comprising in packaged combination a complex of an analog of the aminoglycoside and a label and an antibody produced in response to a compound of the formula



wherein A is  $\text{CH}_2\text{NH}_2$ ,  $\text{CHCH}_3\text{NH}_2$ , or  $\text{CHCH}_3\text{NHCH}_3$ ; B is H or OH; D is H or OH; E is  $\text{NH}_2$  or OH; G' is  $\text{NH}_2$ ,  $\text{NHCH}_3$ ,  $\text{NH-T}$ , or  $\text{NCH}_3\text{-T}$ ; J is H or OH; L is H,  $\text{CH}_3$ , or OH; Q is H or  $\text{CH}_2\text{OH}$ ; Y' is H,  $\text{C(=O)CH(OH)CH}_2\text{CH}_2\text{NH}_2$ , or T; T is a carrier; and T is present in only one of G' or Y'.

9. The test kit of claim 8 wherein the carrier is selected from the group consisting of poly(amino acid)s, polysaccharides, proteins, glycoproteins, and nucleic acids.

10. A test kit for determining an aminoglycoside in a sample comprising in packaged combination an antibody specific for the aminoglycoside and a reagent of the formula



wherein A is  $\text{CH}_2\text{NH}_2$ ,  $\text{CHCH}_3\text{NH}_2$ , or  $\text{CHCH}_3\text{NHCH}_3$ ; B is H or OH; D is H or OH; E is  $\text{NH}_2$  or OH; G' is  $\text{NH}_2$ ,  $\text{NHCH}_3$ ,  $\text{NH-T}$ , or  $\text{NCH}_3\text{-T}$ ; J is H or OH; L is H,  $\text{CH}_3$ , or OH; Q is H or  $\text{CH}_2\text{OH}$ ; Y' is H,  $\text{C(=O)CH(OH)CH}_2\text{CH}_2\text{NH}_2$ , or T; T is a label; and T is present in only one of G' or Y'.

11. A test kit according to claim 7 in which A is  $\text{CH}_2\text{NH}_2$ , B is H, D is H, E is  $\text{NH}_2$ , G' is  $\text{NHCH}_3$ , J is OH, L is  $\text{CH}_3$ , Q is H, and Y' is

